

Title (en)

OPTICAL DEVICE FOR FORMING A LIGHT BEAM

Title (de)

OPTISCHE VORRICHTUNG ZUR FORMUNG EINES LICHTSTRAHLS

Title (fr)

DISPOSITIF OPTIQUE POUR FORMER UN FAISCEAU LUMINEUX

Publication

EP 2705397 A1 20140312 (EN)

Application

EP 12722879 A 20120427

Priority

- EP 11164927 A 20110505
- IB 2012052106 W 20120427
- EP 12722879 A 20120427

Abstract (en)

[origin: WO2012150533A1] The present invention relates to an optical device (229) for forming a light beam, which optical device comprises a lens (330) having a top section (331) configured to receive light emitted by a light source (220), a bottom section (332) configured to allow the received light to exit the lens, and a plurality of side sections (333) stretching from the top section to the bottom section. The plurality of side sections enclose the lens and are adapted to reflect and refract incident rays of the received light. A cross-section (334) of the lens, in a plane perpendicular to a centre axis (338) stretching from the top section to the bottom section, has the shape of a polygon, which polygon is oriented in a lengthwise direction (335) and in a transversal direction (336) being perpendicular to each other. Furthermore, the lens is adapted such that the received light exits the lens as a light beam formed to an elongated shape (5) at a predetermined distance (4) from the optical device. With the presented optical device, a compact lens enabling for a desired elongated illumination distribution is provided.

IPC 8 full level

G02B 17/08 (2006.01); **F21V 5/04** (2006.01); **G02B 27/09** (2006.01)

CPC (source: EP RU US)

F21K 9/60 (2016.07 - EP US); **F21V 5/007** (2013.01 - EP US); **F21V 5/04** (2013.01 - EP US); **G02B 19/0028** (2013.01 - EP US);
G02B 19/0066 (2013.01 - EP US); **F21S 2/00** (2013.01 - EP US); **F21S 8/086** (2013.01 - EP US); **F21V 13/00** (2013.01 - RU);
F21W 2131/103 (2013.01 - EP US); **F21Y 2105/10** (2016.07 - EP US); **F21Y 2115/10** (2016.07 - EP US)

Citation (search report)

See references of WO 2012150533A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2012150533 A1 20121108; CN 103502872 A 20140108; CN 103502872 B 20160914; EP 2705397 A1 20140312; EP 2705397 B1 20190626;
JP 2014514614 A 20140619; JP 6087904 B2 20170301; RU 2013153890 A 20150610; RU 2612562 C2 20170309; US 2014049959 A1 20140220;
US 9377176 B2 20160628

DOCDB simple family (application)

IB 2012052106 W 20120427; CN 201280021865 A 20120427; EP 12722879 A 20120427; JP 2014508902 A 20120427;
RU 2013153890 A 20120427; US 201214113588 A 20120427